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INsite: introduction to a generic paradigm for interpreting user-Web space interaction

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↑ ABSTRACT

INsite is a heuristic-based implementation to provide consistent tracking, analysis and visualization of users' interactions with a generic web site. Our research has immediate applicability in such disparate fields as Business, E-commerce, Distance Education, Entertainment and Management for capturing individual and collective profiles of customers, learners and employees. INsite can identify trends and changes in user(s) behavior (interests) by monitoring their online interactions. It has a three-tier architecture for tracking, analysis and visualization. First, a remote agent transparently tracks user-navigation-paths within a site. Second, a unique Connectivity Matrix (CM) Model (a set of Connectivity Matrices) represents each path (and cluster of paths). Third, the user-web site interaction, thus translated to a finite number of CM-Models, is readily visualized by graphically representing the member matrices of the models. Each member matrix of a representative CM-Model captures a single navigational attribute. Our dimensionally static approach to path and cluster representation by the Connectivity Matrices can reduce the complexity of analysis by several orders. Consequently, we employ a new paradigm for dynamic clustering that leverages on the unique CM-Model of representation.

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Jan Larsen , Lars Kai Hansen , Anna Szymkowiak Have , Torben Christiansen , Thomas Kolenda, Webmining: learning from the world wide web, Computational Statistics & Data Analysis, v.38 n.4, p.517-532, 28 February 2002

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